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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,283	01/02/2002	Tadahiko Furuta	217522US0PCT	1457

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EXAMINER

SHEEHAN, JOHN P

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/019,283

Applicant(s)

FURUTA ET AL.

Examiner

John P. Sheehan

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6&9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicants are advised that in view of the amendments made to the claims, the Restriction Requirement mailed May 27, 2003 has been withdrawn. Claims 1 to 10, all of the claims remaining in this application, have been rejoined and are subject to examination.

### ***Specification***

1. The abstract of the disclosure is objected to because it is more than one paragraph. Correction is required. See MPEP § 608.01(b).
2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1 to 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In claim 1, lines 6 and 7, the meaning of the phrase, "in a total amount of 100% by weight" is unclear. For example does 100% refer to the alloy composition or to the oxygen, nitrogen and carbon content of the alloy?

II. In claim 1, lines 16 and 18, it not clear what it is that applicants are attempting to claim. For example, in line 16, what does "involves a working direction" mean? In this context does "involves" mean parallel to, perpendicular to, at an angle of  $35^{\circ}$ ,  $45^{\circ}$ , etc. to the "working direction"?

III. In claim 1, lines 19 and 20, the definition of the term " $(\nu^2/Xm^2)$ " is not clear. This term is defined as, " $(\nu^2/Xm^2)$ , which is obtained by dividing a secondary moment ( $\nu^2$ ) around a mean value ( $Xm$ )", however it is not clear what " $(\nu^2)$ " is divided by. Form the term , " $(\nu^2/Xm^2)$ " it would appear that " $(\nu^2)$ " is divided by  $Xm^2$ , however that is not what the definition states. The definition states that ( $\nu^2$ ) is divided by "around a mean value ( $Xm$ )" which does not appear to make sense.

IV. In like manner in claim 1, lines 21 and 22 are indefinite regarding the similar language used to define the term, " $(\nu^3/Xm^3)$ ". This term is defined as, " $(\nu^3/Xm^3)$ , which is obtained by dividing a tertiary moment ( $\nu^3$ ) around a mean value ( $Xm$ )", however it is not clear what " $(\nu^3)$ " is divided by. Form the term , " $(\nu^3/Xm^3)$ " it would appear that " $(\nu^3)$ " is divided by  $Xm^3$ , however that is not what

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the definition states. The definition states that ( $\sqrt{3}$ ) is divided by "around a mean value ( $X_m$ )" which does not appear to make sense.

V. Lines 20, 22 and 23 of claim 1, read that ( $X_m$ ) is "being defined by the following equation", however there is no equation that defines ( $X_m$ ).

VI. Claim 1, lines 23 and 24, recite that "values ( $1.6X_m$ )...further involved in measurement values", however there is not indication how "values ( $1.6X_m$ )" are involved in measurement values or what "measurement values" are involved.

VII. In claim 4, line 4, "said specific composition" lacks a clear antecedent.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 1 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmed et al. (Ahmed, US Patent No. 5,871,595, cited in the IDS submitted May 27, 2003).

Ahmed teaches a titanium alloy comprising, in weight percent;

Zr 2.5 to 13 %

Nb 20 to 40 %

Ta 4.5 to 25 %

Ti the balance (column 2, lines 46 to 56)

with interstitial elements C, N and O being present in the amount of up to 0.5%. This alloy composition encompasses applicants' Sample No. 1 alloy disclosed in the instant specification (see page 31, paragraph 00127). In view of this it appears that Ahmed's alloy overlaps the instantly claimed alloys.

The claims and Ahmed differ in that Ahmed does not teach the functional proportions as recited in applicants' claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloys taught by Ahmed overlap applicants' claimed alloy and therefore are considered to establish a prima facie case of obviousness, In re Peterson 65 USPQ2d 1379 (CAFC 2003), In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

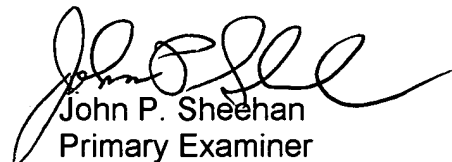
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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps